ABSTRACT

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Title of diploma thesis: Sequential injection chromatography - testing of modern chromatographic columns for fast and efficient separation

This diploma thesis deals with the separation and determination of chosen azodyes (Sudan Orange G, para red, Sudan I, Sudan II, Sudan III and Sudan IV) with the method of sequential injection chromatography .There was used a UV-vis detector that was measuring at the wavelengths of 400, 480, 500 and 600 nm. The separation was done at a monolithic column Chromolith® FastGradient RP-18 endcapped 50-2. The separation was processed in a gradient mode. The mixtures of acetonitril and water were used as mobile phases. Mobile phase number 1 was acetonitril:water 55:45 while the mobile phase number 2 was acetonitril: water 90:10. Next aim was the application of a developed method for determination of chosen azodyes in chilli sauces where they could be added illegally. The results of measurements showed that none substance from the matrix interferes with the determinate substances. The results of the recovery met the criteria just with one concentration level of both, in the second case were influenced probably by an error during the preparation. This method could be validated after further development.